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United States Government **Department of Energy**

Bonneville Power Administration

memorandum

DATE: January 6, 2005

REPLY TO ATTN OF: KEP-4

SUBJECT: Supplement Analysis for the Transmission System Vegetation Management Program FEIS (DOE/EIS-0285/SA - 238) Big Eddy-Ostrander No.1 Project #: **V-O-05/04**

TO: Ed Tompkins
Natural Resource Specialist– TFO-LMT

Proposed Action: Vegetation Management along the Big Eddy-Ostrander No.1, 500 kV Transmission Line Corridor from structures: 39/3 to 73/2 of the reference line (Big Eddy Chemawa No 1.)

Location: The project line is located in Clackamas county Oregon; from Lo lo pass on the Mt. Hood National Forest to Ostrander Substation near the city of Sandy. The project is located in BPA's Olympia Region.

Proposed by: Bonneville Power Administration (BPA).

Description of the Proposal: BPA proposes to remove tall growing and noxious vegetation from the right of way and access roads that can potentially interfere with the operation, safety, maintenance, and reliability of the transmission lines. Unwanted tall growing and noxious vegetation, and reclaim trees will be removed and/or controlled inside the ROW using selective and nonselective methods that may include hand cutting and herbicidal treatment. Vegetation management work will occur between structures 39/3 to 73/2 of the reference transmission line (Big Eddy Chemawa No 1.) This proposal covers approximately 1793 acres of land and encompasses the entire right of way widths of all of the transmission lines located along the Big Eddy-Ostrander No. 1, 500 kV transmission line right of way.

Analysis: A Vegetation Management Checklist was completed for this project in accordance with the requirements identified in the Bonneville Power Administrations Transmission System Vegetation Management Program FEIS (DOE/EIS-0285).

The subject corridor traverses public and private lands in Clackamas County Oregon consisting of, US Forest service lands, rural forest, and private farmlands. No tribal lands are involved.

Section 3 of the checklist identifies the natural resources present in the area of the proposed work. The following summarizes natural resources occurring in the project area along with applicable mitigation measures.

Water Resources: Water bodies (streams, rivers, lakes, wetlands) occurring in the project area are listed in section 3.1 of the Vegetation Management Checklist. Trees in riparian zones will be selectively cut to include only those that are within 50 feet of the conductor at maximum sag. Trees will be topped where shrubs are not present to provide shade and a silt buffer. No ground disturbing vegetation management methods will be implemented thus minimizing the risk for soil erosion and sedimentation near the streams. The following herbicide buffers will be implemented for the project. Outside a 100' buffer from any t&e listed steam, ponds, or wetlands or a 35' buffer from any other steam, ponds, or wetlands Triclopyr BEE (common formulations, Garlon 4 & Tahoe 4E) may be applied. Formulations of Triclopyr TEA (common formulations Garlon 3A & Tahoe 3A) may be applied for spot or localized applications up to one yard of the waters edge for t&e listed streams ponds, or wetlands or up to the waters edge of any other water body or sensitive habitat. For any initial or follow up broadcast treatment with Triclopyr TEA on sprouting stumps or brush a 35' buffer will be maintained from any steam, ponds, wetlands, or sensitive areas.

No drinking water, irrigation wells, or water supplies were identified along the rights of way.

Threatened and Endangered Species/Essential Fish Habitat: Pursuant to its obligations under the Endangered Species Act, BPA has made a determination of whether its proposed project will have any effects on any listed species. A species list was received from the United States Fish and Wildlife Service (USFWS) on December 20th, 2004, identifying threatened and endangered species and Critical Habitat Units potentially occurring in the project area. In addition a review of species under the jurisdiction of NOAA Fisheries was conducted. A determination of "No Effect" was made for all ESA listed species and designated critical habitat for the project. A determination of "No Effect" was made for Essential Fish Habitat waters that occur in the project area.

Cultural Resources: No cultural resources are known for the project area. If a site is discovered during the course of vegetation control, work will be stopped in the vicinity and the appropriate tribe, the BPA Environmental Specialist, and the BPA archeologist will be contacted.

Monitoring: The entire project will be inspected during the work period. Additionally the line will be patrolled annually after treatment to monitor the effectiveness of the treatment and any issues associated with the project.

Findings: This Supplement Analysis finds that (1) the proposed actions are substantially consistent with the Transmission System Vegetation Management Program FEIS (DOE/EIS-0285) and ROD, and; (2) there are no new circumstances or information relevant to environmental concerns and bearing on the proposed actions or their impacts. This Supplement Analysis also finds the proposed actions will not affect threatened or endangered species. Therefore, no further NEPA documentation is required.

/s/ James R. Meyer
*for/*Greg P. Tippetts
Physical Scientist (Environmental)

CONCUR: */s/ Thomas C. McKinney* DATE: 1/10/2005
Thomas C. McKinney
NEPA Compliance Officer

Attachment:
Vegetation Management Checklist

cc:
L. Croff – KEC-4
T. McKinney – KEC-4
J. Meyer – KEP-4
J. Sharpe – KEPR-4
G. Tippetts – KEPR/Olympia
H. Adams – LC-7
J. Hilliard Creecy – T-DITT2
M. Johnson – TF/DOB-1
D. Krauss – TFO/Olympia
D. Swanson – TFOP/LMT
Environmental File – KEC-4
Official File – KEP-4 (EQ-14)

Gtippetts:tmb:4722:1/6/2005 (KEP-KEPR/OLYMPIA-W:\EP\2005 FILES\EQ-14-Supplement Analysis\FEIS-0285-SA-238-Big Eddy-Ostrander.doc)

Vegetation Management Checklist

1. IDENTIFY FACILITY AND THE VEGETATION MANAGEMENT NEED

1.1 Describe Right-of-way.

Corridor Name	Corridor Length & kV	Easement width	Miles of Treatment
Big Eddy-Chemawa No. 1 (**Reference Line**)	230KV	125 Feet	39/3 to Ostrander Sub
Big Eddy-Troutdale No. 1	230kV	125 Feet	39/3 to 61/4
Big Eddy-Ostrander No. 1	500kV	175 Feet	39/3 to Ostrander Sub.
Big Eddy-McLaughlin No.1,2	230 kV	175 Feet	39/3 to Ostrander Sub.
Ostrander-Troutdale N0.1	500kV	150 Feet	1/1 to 5/2
Hanford-Ostrander No.1	500kV	150 Feet	180/4 to Ostrander Sub.

Right Of Way:

Right-of-Way – clearing in right-of-way

Transmission Structures – clearing around.

Reclaim C-Trees

Clearing Access Roads to the ROW

1.2 Describe the vegetation needing management.

Vegetation Types:

Douglas-fir

Western hemlock

Red Alder

Cottonwood

Big Leaf Maple

Willow

Blackberries

Scotchbroom

1.3 List measures you will take to help promote low-growing plant communities. If promoting low-growing plants is not appropriate for this project, explain why.

Vegetation that can grow tall will be selectively eliminated before it reaches a height or density to begin competing with low-growing species. Low-growing species are left untreated if they are not a threat to line integrity. For the first five miles of this project, conifer trees up to six or ten feet in height, depending on location, will be left uncut since their rate of growth is very slow.

1.4 Describe overall management scheme/schedule.

Initial entry – All tall growing vegetation, as identified in the control prescription, will be cut, and sprouting stumps chemically treated to prevent re-sprouting. Access roads, right-of-way roads and structure sites are to be cut and treated. A follow-up chemical treatment will occur on all treated areas in the summer of 2005.

Subsequent entries – Every 3-4 years, a maintenance contract will be necessary to treat newly established trees. The use of herbicides on this entry and subsequent cycles should reduce the quantity and cost of work.

Future cycles – Same as above.

2. IDENTIFY SURROUNDING LAND USE AND LANDOWNERS/MANAGERS

2.1 List the types of landowners and land uses along your corridor.

Landowners/Managers/Uses:

US National forest

Rural forest land

Pasture lands, farmland

2.2 Describe method for notifying right-of-way landowners and requesting information (i.e., doorhanger, letter, phone call, e-mail, and/or meeting). Develop landowner mail list, if appropriate.

Olympia will send letters to the property owners about 3 weeks prior to cutting the brush. Door to door contact will be made where it is warranted. Door hangers have been used at properties where special treatments are anticipated. Conversations with property owners on site, emails, and phone calls are all used. Meetings and/or phone calls have occurred with U.S. Forest Service, BLM, and other agencies involved with management of lands within this project area.

2.3 List the specific land owner/land use measures — determined from the handbook or through your consultations with the entities — that will be applied.

Span		Landowner/use	Specific measures to be applied
From	To		
39/3	Ostrander Sub	Rural areas, agricultural, wooded areas.	Cut, Lop, Scatter tall-growing veg. Clearing structures, access roads, ROW roads.
66/1	66/4	Rural residential, agricultural.	Cut & chip. Spread or pile chips.
39/3 49/4	46/4 50/2	Mt. Hood National Forest	Follow mitigation measures in 2002 Supplemental Analysis. Lop and scatter slash in the first five miles of the project (height-limited cutting) to a maximum depth of two feet.
58/6	58/6	Christmas Tree permitted areas.	Do not cut in active permit areas.

2.4 Review any existing landowner agreements (e.g. tree/brush Permits or Agreements). List in table above any provisions that need to be followed and where they are located.

A December, 2002 Supplemental Analysis for the Transmission System Vegetation Management Program on the Mt. Hood National Forest lists specific mitigation measures to be met in any vegetation projects implemented on the National Forest by BPA. A copy of this document will be issued to the contractor for this project.

2.5 List any known casual informal use of the right-of-way by non-owner publics. List any constraints or measure's to take due to the informal use.

None Known.

2.6 List other potentially affected people, agencies, or tribes (that are not landowners/managers) that need to be notified or coordinated with. Describe method of notification and coordination.

None.

3. IDENTIFY NATURAL RESOURCES

3.1 List any water resources (streams, rivers, lakes, wetlands) that may be impacted by vegetation control activities. For each water body describe the control methods and requirements or mitigation measures that will be used.

Span		Water body	T&E	Method	Herbicide	Application Technique	Buffer
From	To						
41/2+1000'	2001'	Tributary to Sandy River	No	Skip Canyon	Skip Canyon	Skip Canyon	Skip Canyon
43/2 + 800'	1575'	Tributary to Sandy River	No	Skip Canyon	Skip Canyon	Skip Canyon	Skip Canyon
46/2+ 185'	676'	Clear Creek	Yes	Cut, Lop, Scatter tall-growing vegetation.	Garlon 3A	Treat cut stumps right after cutting.	Spot treat with Garlon 3A 100' to 1 yard of waters edge
46/5+50	46/5+700	Clear Creek	Yes	Cut, Lop, Scatter tall-growing vegetation.	Garlon 3A	Treat cut stumps right after cutting.	Spot treat with Garlon 3A 100' to 1 yard of waters edge
46/5+1070'	1270'	Tributary to Clear Creek	No	Cut, Lop, Scatter tall-growing vegetation.	Garlon 3A	Treat cut stumps right after cutting.	Spot treat with Garlon 3A 35' to waters edge
47/2+510'	710'	Tributary to Clear Creek	No	Cut, Lop, Scatter tall-growing vegetation.	Garlon 3A	Treat cut stumps right after cutting.	Spot treat with Garlon 3A 35' to waters edge

49/1+700	49/1+900	Unnamed creek Tributary to Sandy River	No	Cut, Lop, Scatter tall-growing vegetation.	Garlon 3A	Treat cut stumps right after cutting.	Spot treat with Garlon 3A 35' to waters edge
49/3+800	49/3+1200	No name creek Tributary to Sandy River	No	Cut, Lop, Scatter tall-growing vegetation.	Garlon 3A	Treat cut stumps right after cutting.	Spot treat with Garlon 3A 35' to waters edge
50/3+442'	642'	No name creek Tributary to Sandy River	No	Cut, Lop, Scatter tall-growing vegetation.	Garlon 3A	Treat cut stumps right after cutting.	Spot treat with Garlon 3A 35' to waters edge
51/4+350	51/4+700	No name creek Tributary to Sandy River	No	Cut, Lop, Scatter tall-growing vegetation.	Garlon 3A	Treat cut stumps right after cutting.	Spot treat with Garlon 3A 35' to waters edge
52/1+500	52/1+1050	No name creek Tributary to Sandy River	No	Cut, Lop, Scatter tall-growing vegetation.	Garlon 3A	Treat cut stumps right after cutting.	Spot treat with Garlon 3A 35' to waters edge
53/6+769'	1066'	Wetlands	No	Cut, Lop, Scatter tall-growing vegetation.	No Herbicide	No Herbicide	Spot treat with Garlon 3A 35' to wetland boundary
54/3+950	54/3+1125	No name creek	No	Cut, Lop, Scatter tall-growing vegetation.	Garlon 3A	Treat cut stumps right after cutting.	Spot treat with Garlon 3A 35' to waters edge
54/5+637'	855'	Wetland	No	Cut, Lop, Scatter tall-growing vegetation.	No Herbicide	No Herbicide	Spot treat with Garlon 3A 35' to wetland boundary
55/1+0'	370'	Wetland	No	Cut, Lop, Scatter tall-growing vegetation.	No Herbicide	No Herbicide	Spot treat with Garlon 3A 35' to wetland boundary
56/2+400	56/2+600	No name creek	No	Cut, Lop, Scatter tall-growing vegetation.	Garlon 3A	Treat cut stumps right after cutting.	Spot treat with Garlon 3A 35' to waters edge
57/2+1200'	2500'	Sandy River	Yes	Cut, Lop, Scatter tall-growing vegetation.	Garlon 3A	Treat cut stumps right after cutting.	Spot treat with Garlon 3A 100' to 1 yard of waters edge
59/2+1050'	1400'	Badger Creek	No	Skip Draw	Skip Draw	Skip Draw	Skip Draw

59/4+700	59/4+900	No name creek	No	Cut, Lop, Scatter tall-growing vegetation.	Garlon 3A	Treat cut stumps right after cutting.	Spot treat with Garlon 3A 35' to waters edge
60/1+600	60/1+800	No name creek	No	Cut, Lop, Scatter tall-growing vegetation.	Garlon 3A	Treat cut stumps right after cutting.	Spot treat with Garlon 3A 35' to waters edge
62/1 +450'	1798'	Cedar Creek Tributary to Sandy River	No	Skip Draw	Skip Draw	Skip Draw	Skip Draw
62/3 +600'	975'	No name Creek Tributary to Sandy River	No	Skip Draw	Skip Draw	Skip Draw	Skip Draw
63/4+800	63/4+ 1100	Tickle Creek and wetland	No	Cut, Lop, Scatter tall-growing vegetation.	Garlon 3A	Treat cut stumps right after cutting.	Spot treat with Garlon 3A 35' to waters edge
63/5+0'	230'	Wetland	No	Cut, Lop, Scatter tall-growing vegetation.	No Herbicide	No Herbicide	Spot treat with Garlon 3A 35' to wetland boundary
64/1+800	64/1+ 1000	No Name creek	No	Cut, Lop, Scatter tall-growing vegetation.	Garlon 3A	Treat cut stumps right after cutting.	Spot treat with Garlon 3A 35' to waters edge
65/1+670	1300'	No Name creek	No	Cut, Lop, Scatter tall-growing vegetation.	Garlon 3A	Treat cut stumps right after cutting.	Spot treat with Garlon 3A 35' to waters edge
65/2+0	1200'	No Name creek	No	Cut, Lop, Scatter tall-growing vegetation.	Garlon 3A	Treat cut stumps right after cutting.	Spot treat with Garlon 3A 35' to waters edge
69/1+1138'	1465'	Wetland & Pond on ROW	No	Cut, Lop, Scatter tall-growing vegetation.	No Herbicide	No Herbicide	Spot treat with Garlon 3A 35' to wetland boundary
69/3+ 200'	1027'	Deep Creek	Yes	Cut, Lop, Scatter tall-growing vegetation.	Garlon 3A	Treat cut stumps right after cutting.	Spot treat with Garlon 3A 100' to 1 yard of waters edge
70/3+1100'	1650'	No Name Creek	No	Cut, Lop, Scatter tall-growing vegetation.	No Herbicide	No Herbicide	Spot treat with Garlon 3A 35' to wetland boundary

71/1+750	71/1+850	Goose creek	Yes	Cut, Lop, Scatter tall-growing vegetation.	Garlon 3A	Treat cut stumps right after cutting.	Spot treat with Garlon 3A 100' to 1 yard of waters edge
71/5+300	71/5+700	Clackamas River	Yes	Cut, Lop, Scatter tall-growing vegetation.	Garlon 3A	Treat cut stumps right after cutting.	Spot treat with Garlon 3A 100' to 1 yard of waters edge
73/1+750'	950'	Foster Creek	Yes	Cut, Lop, Scatter tall-growing vegetation.	Garlon 3A	Treat cut stumps right after cutting.	Spot treat with Garlon 3A 100' to 1 yard of waters edge

3.2 If planning to use herbicides, list locations of any known irrigation source, wells, or springs (landowners maybe able to provide this info if requested).

None

3.3 List below the areas that have Threatened or Endangered Plant or Animal Species and the name of the species, and any special measures that need to be taken due to their presence. Attach any BAs, T&E maps, or letters from US Fish and Wildlife.

Span		**T&E Species**	**Method/mitigation or avoidance measures**
From	**To**		
39/4+583	39/6+0	Northern Spotted Owl Critical Habitat	The work will occur outside the critical timing restriction for the Northern Spotted owl Breeding season from March 1st to September 30th. No trees with nesting characteristics will be removed.
39/5	39/6 100'-200' off ROW	Northern Spotted Owl Observation	The work will occur outside the critical timing restriction for the Northern Spotted owl Breeding season from March 1st to September 30th. No trees with nesting characteristics will be removed.
40/5	40/5 1000' off of ROW	Northern Spotted Owl Observation	The work will occur outside the critical timing restriction for the Northern Spotted owl Breeding season from March 1st to September 30th. No trees with nesting characteristics will be removed.
46/2+185'	676'	Clear Creek Summer Steelhead Winter Steelhead Spring Chinook	Selective cutting of trees in riparian zone. Top trees when shrubs are not present to provide shade and a silt buffer. Only spot and localized Herbicide treatments within 100' up to 1 Yard of waters edge with the practically non-toxic (to Aquatic species) chemical Triclopyr TEA ("Garlon 3A" / "Tahoe 3A" *trade names*). No chemical treatment within one yard of the waters edge.
46/5+50	46/5+700	Clear Creek Summer Steelhead Winter Steelhead Spring Chinook	Same Measures as listed previously in 46/2+185'-676' for Clear Creek.

57/2+ 1200’	2500’	Sandy River Fall & Spring Chinook Salmon Summer & Winter Steelhead	Same Measures as listed previously in 46/2+185’-676’ for Clear Creek.
69/3+ 200’	1027’	Deep Creek Winter Steelhead	Same Measures as listed previously in 46/2+185’-676’ for Clear Creek.
71/1+ 750	71/1+ 850	Goose creek Winter Steelhead	Same Measures as listed previously in 46/2+185’-676’ for Clear Creek.
71/5+ 300	71/5+ 700	Clackamas River Fall & Spring Chinook Salmon Summer & Winter Steelhead	Same Measures as listed previously in 46/2+185’-676’ for Clear Creek.
73/1+ 750’	950’	Foster Creek Winter Steelhead	Same Measures as listed previously in 46/2+185’-676’ for Clear Creek.

3.4 List any other measures to be taken for enhancing wildlife habitat or protecting species.

Span		**Species**	**Measures**
From	**To**		
46/2+ 185’	73/1+ 950’	Essential fish Habitat for: Coho Salmon & Chinook Salmon	*Many of the rivers and creeks listed in the T&E section of this document are also Essential fish habitat for Coho Salmon. The more stringent conservation and avoidence measures listed for T&E waters in Section 3.3 will be implemented.* Selective cutting of trees in riparian zone. Top trees when shrubs are not present to provide shade and a silt buffer. Only spot and localized Herbicide treatments within 100’ up to 1 Yard of waters edge with the practically non toxic (to Aquatic species) chemical Triclopyr TEA (“Garlon 3A” / “Tahoe 3A” *trade names*). No chemical treatment within one yard of the waters edge.
70/3+ 1100’	1650’	No name Creek Essential fish Habitat for: Coho Salmon	Selective cutting of trees in riparian zone. Top trees when shrubs are not present to provide shade and a silt buffer. Only spot and localized Herbicide treatments within 35’ up to 1 Yard of waters edge with the practically non toxic (to Aquatic species) chemical Triclopyr TEA (“Garlon 3A” / “Tahoe 3A” *trade names*).

3.5 List any visually sensitive areas and the measures to be taken at these areas.

None

3.6 List areas with cultural resources and the measures to be taken in those areas.

Describe sensitivity	Method/mitigation measures
No known sites	No ground disturbing activities will be implemented.

3.7 List areas with steep slopes or potential erosion areas and the measure and methods to be applied in those areas.

Describe sensitivity	Method/mitigation measures
N/A	All natural vegetation that is not tall growing will be left undisturbed for erosion control. Less than 5 percent of all vegetation ground cover will be treated in this activity.

3.8 List areas of spanned canyons and the type of cutting needed.

N/A

4. DETERMINE VEGETATION CONTROL METHODS

4.1 List Methods that will be used in areas not previously addressed in steps above.

Methods, including herbicide active ingredient, trade name, application technique
For non-sensitive areas, cut-stump/basal treatment uses 25% Garlon 4 (triclopyr BEE) and 75% water/ forest crop oil. Summer foliar application on re-sprouts uses 3% Garlon 4 and 97% water, and dye. For areas near water, Garlon 3A is substituted for Garlon 4. A 50/50 % mixture of Garlon 3A/Tahoe 3A (triclopyr TEA) for cut-stump/basal treatment will be used in the riparian areas. For non-T&E listed creek riparian zones treatment with Garlon 3A within 35' up to the waters edge. For T&E listed creek riparian zones treatment with Garlon 3A within 100' up to one yard of the waters edge. A late spring and early summer follow-up foliar treatment with Garlon 3A/Tahoe 3A and Escort on all hardwood species except the use of Arsenal on Big Leaf Maple, Wild Cherries and Cottonwood sprouting stumps and/or brush in non-T&E/EFH buffers. Initially, foliar treat Scotch broom as well as a follow up treatment in the spring-summer

5. DETERMINE DEBRIS DISPOSAL AND REVEGETATION

5.1 Describe the debris disposal methods to be used and any special considerations.

Debris Disposal:

Lop and Scatter: Branches of a fallen tree are cut off (lopped) by ax or chainsaw, so the tree trunk lies flat on the ground. The trunks are usually cut to 10-15 foot lengths. The cut branches and trunks are then scattered on the ground to a depth of 2-3 feet, and left to decompose.

Mulch: Mulching is a debris treatment that falls between chipping and lop-and-scatter. The debris is cut into 1-to-2-ft. lengths, scattered on the right-of-way and left to decompose.

This method is used when terrain and conditions do not allow the use of mechanical chipping equipment.

5.2 List areas of reseeding or replanting (those areas not already described in steps 1, 2, or 3).

N/A

Native grasses and shrubs are present on the entire right-of-way and are expected to seed into the areas that will have lightly disturbed soil predominately located on the right-of-way roads. BPA expects 2-3 vehicles of the brush contractor and 1 contract inspector's vehicle will be present on the site.

5.3 If not using native seed/plants, describe why.

N/A

5.4 Describe timing and any follow-up that will need to take place to ensure germination/success of seeding/planting.

N/A

6. DETERMINE MONITORING NEEDS

6.1 Describe the follow-up/monitoring cycle that will be used to evaluate the effectiveness of the vegetation control methods used.

Monitoring of the effectiveness of the cutting and initial herbicide treatment will begin in the spring and early summer. Monitoring the follow-up herbicide treatment will be in the mid to late summer.

6.2 Describe any follow-up or monitoring needed to determine if mitigation measures were effective.

Annually patrol the transmission line by the line crew and the Natural Resource Specialist will periodically monitor the right-of-way for effective mitigation measures.

7. PREPARE APPROPRIATE ENVIRONMENTAL DOCUMENTATION

7.1 Describe any potential project impacts or project work that are different than those disclosed in the Transmission System Vegetation Management Program EIS. Describe how those differences impact natural resources and if the differences are "substantial".

All proposed brush cutting and chemical treatment activities on this corridor is noted in the EIS.

7.2 Is there a need for additional NEPA documentation (i.e. Forest Service requirement, Record of Decision, supplemental EIS)? If so, attach.

No